

# **APA 2017 Winter Education Conference**

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**John Rogers, AFSL Executive Director  
Quin Dodd, AFSL General Counsel**





# I. Update on CPSC's Proposed Rule

- Quin D. Dodd

# U.S. Consumer Product Safety Commission (CPSC): Notice of Proposed Rulemaking (NPR)

- In January, CPSC approved for public comment “Amendments to Fireworks Regulations,” Docket No. CPSC-2006-0034 (CPSC-FRDOC-0001-0862), available at [www.regulations.gov](http://www.regulations.gov)
- Approved 3-0-2 (two R commissioners abstained out of “deference” to Trump executive order), but entire Commission expressed support
- 75-day public comment period ends April 18, 2017

# Key Elements of NPR: Break Charges

- Adoption of current APA/AFSL provision banning fine (below 100) mesh metals in fireworks containing a burst (break) charge (primarily in aerial devices) if the burst charge exceeds 2 grains (130 mg) of composition.
- Accompanied by indication that the agency will exercise “compliance discretion” to allow up to 1 percent, by weight, of fine mesh metal “contaminants” in burst charges).
- Essentially same as last year’s “Statement of Policy” regarding the meaning of “intended to produce audible effects” (16 CFR 1500.17(a)(3)), to replace controversial “ear test.”

# Break Charge, cont.

- CPSC proposal (new 16 CFR § 1500.17(a)(3)(i), declares as a “banned hazardous substance”:

*“Fireworks devices that contain a burst charge containing metallic powder less than 100 mesh in particle size . . . If the burst charge is produced by a charge of more than 2 grains (~130 mg) of pyrotechnic composition.”*

**Note:**

- Drops all reference to “intended to produce audible effect”
- 1 percent proposed “contamination” allowance of fine mesh metals
- Other “prohibited chemicals” will still apply
- CPSC will use x-ray fluorescence (XRF) to screen and ICP (wet chemistry) for final product evaluation

# Break Charge, cont.

- Current APA/DOT 87-1 ( § 2.5):

*“Any burst charge containing metallic powder (such as magnalium or aluminum) less than 100 mesh in particle size, is considered to be intended to produce an audible effect, and is limited to 130 mg in 1.4G fireworks devices. Burst charge consisting of black powder or equivalent non-metallic composition is not considered to be intended to produce an audible effect when it is used to expel and ignite a secondary effect in a fireworks device.”*

**Note:** AFSL is very similar for aerial devices, e.g., 2-2.2.1  
*“The break charge of individual [mine and shell devices] must consist of black powder or equivalent.”*

# Break Charge, cont.

- Proposed NEW APA/DOT 87-1:

*“The chemical composition used for break charges must not contain more than 10 percent in total combined weight of any of the following: metal powders (must be greater than 149 microns in particle size), phthalates, terephthlates, benzoates and salicylates.”*

## **Note:**

- Would add these new four substances as specifically added chemicals that would be limited in break charge composition, in addition to other “prohibited” chemicals
- Could create inconsistency between new 87-1 and CSPC standards

# Break Charge, cont.

New CSPC standards would also adopt other, current APA/AFSL limitations for aerial devices ( § 3.1.2.5 and 3.1.2.6):

- No fine mesh metals in lift charges
- Mine and shell: 60 g total per tube composition limit; 20 g lift charge limit; 200 g total limit for multiple tube devices
- Reloadable tube: 60 g limit per shell; 20 g lift charge limit; break charge may not exceed 25% of total composition; 400 g total composition limit per kit



# Other Provisions of CPSC NPR:

- Adoption of 87-1 (same as or similar to AFSL) composition limits on various fountain devices, torches, wheels, and chasers
- Clarifies that firecrackers are subject to 50 mg limit, regardless of “whether intended to produce audible effects
- Revises and expands CPSC “prohibited chemicals” list to specifically limit to no more than 0.25% (to allow for contamination)
- Adds HCB (0.01%) and lead (tetroxide and other lead compounds greater than 0.25%) to CPSC prohibited chemicals list
- Formally adopts the CPSC side ignition test (similar to APA/AFSL) as a mandatory standard.

# Other Provisions of CPSC NPR, cont.

- Adds to CPSC base dimension requirements by requiring that bases remain attached during handling, storage and operation (similar to APA/AFSL)
- Adopts APA/AFSL general prohibition on “burnout” and “blowout” of fireworks
- Adopts APA/AFSL prohibition of projection of “metal, glass or brittle plastic fragments”
- Clarifies that “aerial bombs” are banned (“a tube device that fires an explosive charge into the air without added visual effect”)
- Adopts other APA definitions of: explosive; pyrotechnic composition; firecracker; burnout; blowout; and base.



## II. New Standards Approved by Board

## Standard for Fuseless Firecrackers

*“Section 1-1.4 This standard applies only to devices that have been approved and assigned a transportation classification of fireworks UN0337, 1.4S by the U.S. Department of Transportation.”*

*“Section 2-1.6 The explosive composition for a single fuseless firecracker must not exceed 50 milligrams.”*

*“Section 2-1.10 Individual fuseless firecrackers must not ignite when dropped onto concrete or equivalent non-yielding surface or asphalt from a height of two (2.0) feet or the box for 20 when dropped from a height of five (5.0) feet.”*



## Standard for Fuseless Firecrackers

*“Section 2-1.13 The maximum number of fuseless firecrackers per individual retail sales package shall be 20 units, packed with an equal or greater volume of sawdust or similar impact-absorbing material.”*

*“Section 2-1.14 No more than one (1) fuseless firecracker shall ignite inside a sealed retail package when the package is dropped onto a concrete or asphalt surface from a height of 5 (5.0) feet.”*

*“Section 3-2.3 Individual fuseless firecrackers with outside diameter greater than 1.4” must bear the following identification.*

*Consumer Fireworks 1.4S”*

## Standard for Fuseless Firecrackers

*“Section 4-1.2 Product design, packaging, and case packing must produce a finished shipping case in which simultaneous explosion of most or all of the items does not result from ignition of one item in the shipping case.”*

*Effective Date: April 1, 2017.*



## REQUIREMENTS FOR FUSES

*“Safety fuse: A fuse consisting of a thread-wrapped powder train that has been coated with **lacquer sufficient to prevent side ignition when tested in according with the AFSL test procedure for side ignition resistance** ~~a water-resistant material.~~”*

*Effective Date: April 1, 2017.*



# Questions & Answers



[www.afsl.org](http://www.afsl.org)

THANK YOU!

